This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1.   (Previously Presented) A workflow management method for creating and delivering output material, comprising:

generating a customer record to include fields specifying at least one product, customer preferences, and a selected delivery option indicating a method to deliver generated output material on the product specified in the customer record;

adding a job record including a status field to a job status table for the customer record;

setting the added job record status to a first status;

processing a selected job in the job status table;

invoking a first worker if the selected job has the first status;

generating, with the first worker, output material from processing the product and customer preference fields in the customer record for the selected job;

setting the status for the selected job in the job status table to a second status after generating the output material with the first worker;

invoking a second worker if the selected job has the second status;

determining, with the second worker, a selected one of a plurality of delivery options from the customer record for the selected job; and

transmitting, with the second worker, the output material via the determined delivery option to the customer specified in the customer record.

2.   (Original) The method of claim 1, wherein the first worker generates output material by:

accessing at least one content file by processing a database table using values in the customer record associated with the selected job; and

generating the content of each accessed file into the output material.

3. (Previously Presented) The method of claim 2, wherein the first worker further performs:

processing a template including queries of records in the database table;

accessing at least one value in a field in one customer record to include in a query against the database table; and

applying the query against the database table to determine a record associated with a file including fields matching the query, wherein the accessed file is associated with the determined record, and wherein generating the content into the output material comprises generating the content from the accessed file into the template, which forms the output material.

4. (Original) The method of claim 1, wherein the first status is associated with the first worker and the second status is associated with the second worker, wherein the first and second workers further perform querying the job status table to access all jobs having the status associated with the worker.

5. (Original) The method of claim 1, further comprising:

determining, with the first and second workers, whether an error occurred while processing the selected job;

setting, with the first and second workers, the status in the job status table for the selected job to an error status;

invoking an error worker if the selected job has the error status;

performing, with the error worker, error recovery operations for the selected job; and

setting, with the error worker, the status of the selected job to one of the first and second statuses after the error recovery operation.

6. (Original) The method of claim 1, wherein the job status table is processed by a supervisor program that polls the job status table at predetermined intervals, wherein the supervisor program performs the steps of invoking the first and second workers, and wherein the supervisor program processes every record in the job status table when performing the polling operation.

7. (Currently Amended) ~~The method of claim 1, wherein~~ A workflow management method for creating and delivering output material, comprising:

generating a customer record to include fields specifying at least one product, customer preferences, and a selected delivery option indicating a method to deliver generated output material on the product specified in the customer record;

adding a job record including a status field to a job status table for the customer record;

providing a worker transition table ~~includes~~ including a plurality of records, each indicating an input worker, a completion state, an output worker, and an output state, wherein the input worker indicates the worker assigned to process the job, the completion state is a status indicated for the job after the input worker processes the job, the output worker is the worker that processes the job after having been processed by the input worker and resulting in the completion state, and the output state is the state to which the job status in the job status table is set, and wherein the job status table further indicates a current worker assigned to process the job~~[[,]]~~ [[:]]

setting the added job record status to a first status;

processing a selected job in the job status table;

invoking a first worker if the selected job has the first status;

generating, with the first worker, output material from processing the product and customer preference fields in the customer record for the selected job;

setting the status for the selected job in the job status table to a second status after generating the output material with the first worker, wherein setting the status for the selected job in the job status table comprises determining from the worker transition table one record having an input worker and completion state matching the current worker and the job status, respectively, and setting the status for the selected job to the output state and the current worker to the output worker[[;]]

invoking a second worker if the selected job has the second status;

determining, with the second worker, a selected one of a plurality of delivery options from the customer record for the selected job; and

transmitting, with the second worker, the output material via the determined delivery option to the customer specified in the customer record.

8.   (Original) The method of claim 7, further comprising invoking the output worker after setting the job status to the output status.

9.   (Previously Presented) The method of claim 7, wherein setting the status for the selected job after processing the job with one worker, comprises the worker that completed processing the job setting the completion status to a state indicating an outcome of processing the job.

10.   (Previously Presented) The method of claim 1, further comprising:

setting the status to a third status after adding the job in the job status table;

invoking a data conditioning worker if the job status for the selected job is the third status;

processing, with the data conditioning worker, the customer record to determine whether at least one value satisfies at least one condition;

taking corrective actions, with the data conditioning worker, if the data in the customer record does not satisfy each condition; and

setting the status of the selected job to the first status if the data in the customer record satisfies each condition.

11.   (Previously Presented) The method of claim 6, further comprising an imposition worker and table of contents worker, wherein the supervisor program sets the job status to an imposition status and table of content status, and wherein the supervisor program invokes the imposition and table of content workers.

12.   (Currently Amended) ~~The method of claim 1, further comprising:~~ A workflow management method for creating and delivering output material, comprising:

generating a customer record to include fields specifying at least one product, customer preferences, and a selected delivery option indicating a method to deliver generated output material on the product specified in the customer record;

adding a job record including a status field to a job status table for the customer record;

setting the added job record status to a first status;

processing a selected job in the job status table;

invoking a first worker if the selected job has the first status;

generating, with the first worker, output material from processing the product and customer preference fields in the customer record for the selected job;

setting the status for the selected job in the job status table to a second status after generating the output material with the first worker;

invoking a second worker if the selected job has the second status;

determining, with the second worker, a selected one of a plurality of delivery options from the customer record for the selected job;

transmitting, with the second worker, the output material via the determined delivery option to the customer specified in the customer record;

generating information on the output material;

setting the status for the selected job in the job status table to a third status;

invoking an accounting worker if the job has the third status;

processing, with the accounting worker, the generated information on the output material to determine costs of generating the output material; and

generating, with the accounting worker, an invoice including the determined costs of the output material.

13.   (Original) The method of claim 1, wherein there are multiple workers each associated with one input status and at least one output status, wherein the status of the job is updated to one associated output status after one worker completes processing a job, wherein the output status for one worker is the input status associated with one other worker, and wherein the definition of input and output statuses for workers defines the workflow of the job.

14.   (Previously Presented) A workflow management system for creating and delivering output material, comprising:

means for generating a customer record to include fields specifying at least one product, customer preferences, and a selected delivery option indicating a method to deliver generated output material on the product specified in the customer record;

means for adding a job record including a status field to a job status table for the customer record;

means for setting the added job record status to a first status;

means for processing a selected job in the job status table;

means for invoking a first worker if the selected job has the first status;

means for generating, with the first worker, output material from processing the product and customer preference fields in the customer record for the selected job;

means for setting the status for the selected job in the job status table to a second status after generating the output material with the first worker;

means for invoking a second worker if the selected job has the second status;

means for determining, with the second worker, a selected one of a plurality of delivery options from the customer record for the selected job; and

means for transmitting, with the second worker, the output material via the determined delivery option to the customer specified in the customer record.

15.   (Original) The system of claim 14, wherein the means, performed by the first worker, for generating output material comprises:

accessing at least one content file by processing a database table using values in the customer record associated with the selected job; and

generating the content of each accessed file into the output material.

16.   (Previously Presented) The system of claim 15, wherein the first worker further comprises:

means for processing a template including queries of records in the database table;

means for accessing at least one value in a field in one customer record to include in a query against the database table; and

means for applying the query against the database table to determine a record associated with a file including fields matching the query, wherein the accessed file is associated with the determined record, and wherein generating the content into the output material comprises generating the content from the accessed file into the template, which forms the output material.

17.   (Original) The system of claim 14, wherein the first status is associated with the first worker and the second status is associated with the second worker, wherein the first and second workers further comprises means for querying the job status table to access all jobs having the status associated with the worker.

18.   (Original) The system of claim 14, further comprising:

means for determining, with the first and second workers, whether an error occurred while processing the selected job;

means for setting, with the first and second workers, the status in the job status table for the selected job to an error status;

means for invoking an error worker if the selected job has the error status;

means for performing, with the error worker, error recovery operations for the selected job; and

means for setting, with the error worker, the status of the selected job to one of the first and second statuses after the error recovery operation.

19.   (Original) The system of claim 14, wherein the job status table is processed by a supervisor program that polls the job status table at predetermined intervals, wherein the supervisor program includes the means for invoking the first and second workers, and wherein the supervisor program further comprises means for processing every record in the job status table when performing the polling operation.

20.   (Currently Amended) ~~The system of claim 14, wherein~~ A workflow management system for creating and delivering output material, comprising:

means for generating a customer record to include fields specifying at least one product, customer preferences, and a selected delivery option indicating a method to deliver generated output material on the product specified in the customer record;

means for adding a job record including a status field to a job status table for the customer record;

means for providing a worker transition table includes a plurality of records, each indicating an input worker, a completion state, an output worker, and an output state, wherein the input worker indicates the worker assigned to process the job, the completion state is a status indicated for the job after the input worker processes the job, the output worker is the worker that processes the job after having been processed by the input worker and resulting in the completion state, and the output state is the state to which the job status in the job status table is set, and wherein the job status table further indicates a current worker assigned to process the job[[,]] [[;]]

means for setting the added job record status to a first status;

means for processing a selected job in the job status table;

means for invoking a first worker if the selected job has the first status;

means for generating, with the first worker, output material from processing the product and customer preference fields in the customer record for the selected job;

means for setting the status for the selected job in the job status table to a second status after generating the output material with the first worker, wherein the means for setting the status for the selected job in the job status table ~~comprises determining~~ determines from the worker transition table one record having an input worker and completion state matching the current worker and the job status, respectively, and setting the status for the selected job to the output state and the current worker to the output worker[[;]]

means for invoking a second worker if the selected job has the second status;

means for determining, with the second worker, a selected one of a plurality of delivery options from the customer record for the selected job; and

means for transmitting, with the second worker, the output material via the determined delivery option to the customer specified in the customer record.

21.   (Original) The system of claim 20, further comprising means for invoking the output worker after setting the job status to the output status.

22.   (Previously Presented) The system of claim 20, wherein the means for setting the status for the selected job after processing the job with one worker, comprises the worker that completed processing the job setting the completion status to a state indicating an outcome of processing the job.

23.   (Previously Presented)The system of claim 14, further comprising:

means for setting the status to a third status after adding the job in the job status table;

means for invoking a data conditioning worker if the job status for the selected job is the third status;

means for processing, with the data conditioning worker, the customer record to determine whether at least one value satisfies at least one condition;

means for taking corrective actions, with the data conditioning worker, if the data in the customer record does not satisfy each condition; and

means for setting the status of the selected job to the first status if the data in the customer record satisfies each condition.

24.   (Previously Presented) The system of claim 19, further comprising an imposition worker and table of contents worker, wherein the supervisor program includes:

means for setting the job status to an imposition status and table of content status; and

means for invoking the imposition and table of content workers.

25.   (Currently Amended) ~~The system of claim 14, further comprising:~~ A workflow management system for creating and delivering output material, comprising:

means for generating a customer record to include fields specifying at least one product, customer preferences, and a selected delivery option indicating a method to deliver generated output material on the product specified in the customer record;

means for adding a job record including a status field to a job status table for the customer record;

means for setting the added job record status to a first status;

means for processing a selected job in the job status table;

means for invoking a first worker if the selected job has the first status;

means for generating, with the first worker, output material from processing the product and customer preference fields in the customer record for the selected job;

means for setting the status for the selected job in the job status table to a second status after generating the output material with the first worker;

means for invoking a second worker if the selected job has the second status;

means for determining, with the second worker, a selected one of a plurality of delivery options from the customer record for the selected job;

means for transmitting, with the second worker, the output material via the determined delivery option to the customer specified in the customer record;

means for generating information on the output material;

means for setting the status for the selected job in the job status table to a third status;

means for invoking an accounting worker if the job has the third status;

means for processing, with the accounting worker, the generated information on the output material to determine costs of generating the output material; and

means for generating, with the accounting worker, an invoice including the determined costs of the output material.

26.   (Original) The system of claim 14, wherein there are multiple workers each associated with one input status and at least one output status, wherein the status of the job is updated to one associated output status after one worker completes processing a job, wherein the output status for one worker is the input status associated with one other worker, and wherein the definition of input and output statuses for workers defines the workflow of the job.

27.   (Previously Presented) An article of manufacture for use in a workflow management system for creating and delivering output material, the article of manufacture

comprising computer readable storage media including a plurality of computer programs, including a first worker and second worker, embedded therein capable of causing at least one computer to perform:

generating a customer record to include fields specifying at least one product, customer preferences, and a selected delivery option indicating a method to deliver generated output material on the product specified in the customer record;

adding a job record including a status field to a job status table for the customer record;

setting the added job record status to a first status;

processing a selected job in the job status table;

invoking the first worker if the selected job has the first status;

generating, with the first worker, output material from processing the product and customer preference fields in the customer record for the selected job;

setting the status for the selected job in the job status table to a second status after generating the output material with the first worker;

invoking the second worker if the selected job has the second status;

determining, with the second worker, a selected one of a plurality of delivery options from the customer record for the selected job; and

transmitting, with the second worker, the output material via the determined delivery option to the customer specified in the customer record.

28.   (Original) The article of manufacture of claim 27, wherein the first worker generates output material by:

accessing at least one content file by processing a database table using values in the customer record associated with the selected job; and

generating the content of each accessed file into the output material.

29.   (Currently Amended) The article of manufacture of ~~claim 27~~ claim 28, wherein the first worker further causes the at least one computer to perform:

processing a template including queries of records in the database table;

accessing at least one value in a field in one customer record to include in a query against the database table; and

applying the query against the database table to determine a record associated with a file including fields matching the query, wherein the accessed file is associated with the determined record, and wherein generating the content into the output material comprises generating the content from the accessed file into the template, which forms the output material.

30.   (Original) The article of manufacture of claim 27, wherein the first status is associated with the first worker and the second status is associated with the second worker, wherein the first and second workers further cause the at least one computer to perform querying the job status table to access all jobs having the status associated with the worker.

31.   (Original) The article of manufacture of claim 27, wherein the computer programs embedded in the computer useable media further includes an error worker, further comprising:

determining, with the first and second workers, whether an error occurred while processing the selected job;

setting, with the first and second workers, the status in the job status table for the selected job to an error status;

invoking the error worker if the selected job has the error status;

performing, with the error worker, error recovery operations for the selected job; and

setting, with the error worker, the status of the selected job to one of the first and second statuses after the error recovery operation.

32.   (Original) The article of manufacture of claim 27, wherein the computer programs embedded in the computer useable media further include a supervisor program, wherein the job status table is processed by the supervisor program that polls the job status table at predetermined intervals, wherein the supervisor program causes the at least one computer to perform invoking the first and second workers, and wherein the supervisor program processes every record in the job status table when performing the polling operation.

33.   (Currently Amended) ~~The article of manufacture of claim 27, wherein~~ An article of manufacture for use in a workflow management system for creating and delivering output material, the article of manufacture comprising computer readable storage media including a plurality of computer programs, including a first worker and second worker, embedded therein capable of causing at least one computer to perform:

generating a customer record to include fields specifying at least one product, customer preferences, and a selected delivery option indicating a method to deliver generated output material on the product specified in the customer record;

adding a job record including a status field to a job status table for the customer record;

providing a worker transition table includes a plurality of records, each indicating an input worker, a completion state, an output worker, and an output state, wherein the input worker indicates the worker assigned to process the job, the completion state is a status indicated for the job after the input worker processes the job, the output worker is the worker that processes the job after having been processed by the input worker and resulting in the completion state, and the output state is the state to which the job status in the job status table is set, and wherein the job status table further indicates a current worker assigned to process the job~~[[,]]~~ [[:]]

setting the added job record status to a first status;

processing a selected job in the job status table;

invoking the first worker if the selected job has the first status;

generating, with the first worker, output material from processing the product and customer preference fields in the customer record for the selected job;

setting the status for the selected job in the job status table to a second status after generating the output material with the first worker, wherein setting the status for the selected job in the job status table comprises determining from the worker transition table one record having an input worker and completion state matching the current worker and the job status, respectively, and setting the status for the selected job to the output state and the current worker to the output worker~~[[;]]~~

invoking the second worker if the selected job has the second status;

determining, with the second worker, a selected one of a plurality of delivery options from the customer record for the selected job; and

transcripting, with the second worker, the output material via the determined delivery
option to the customer specified in the customer record.

34.   (Original) The article of manufacture of claim 33, further comprising invoking the
output worker after setting the job status to the output status.

35.   (Previously Presented) The article of manufacture of claim 33, wherein setting the
status for the selected job after processing the job with one worker comprises the worker that
completed processing the job setting the completion status to a state indicating an outcome of
processing the job.

36.   (Previously Presented) The article of manufacture of claim 27, wherein the
computer programs embedded in the computer useable media further includes a data
conditioning worker, further comprising:
    setting the status to a third status after adding the job in the job status table;
    invoking a data conditioning worker if the job status for the selected job is the third
status;
    processing, with the data conditioning worker, the customer record to determine whether
at least one value satisfies at least one condition;
    taking corrective actions, with the data conditioning worker, if the data in the customer
record does not satisfy each condition; and
    setting the status of the selected job to the first status if the data in the customer record
satisfies each condition.

37.   (Previously Presented) The article of manufacture of claim 32, wherein the
computer programs embedded in the computer useable media further include an imposition
worker and table of contents worker, wherein the supervisor program sets the job status to an
imposition status and table of content status, and wherein the supervisor program invokes the
imposition and table of content workers.

38.   (Currently Amended) ~~The article of manufacture of claim 27, further comprising:~~ An article of manufacture for use in a workflow management system for creating and delivering output material, the article of manufacture comprising computer readable storage media including a plurality of computer programs, including a first worker and second worker, embedded therein capable of causing at least one computer to perform:

generating a customer record to include fields specifying at least one product, customer preferences, and a selected delivery option indicating a method to deliver generated output material on the product specified in the customer record;

adding a job record including a status field to a job status table for the customer record;

setting the added job record status to a first status;

processing a selected job in the job status table;

invoking the first worker if the selected job has the first status;

generating, with the first worker, output material from processing the product and customer preference fields in the customer record for the selected job;

setting the status for the selected job in the job status table to a second status after generating the output material with the first worker;

invoking the second worker if the selected job has the second status;

determining, with the second worker, a selected one of a plurality of delivery options from the customer record for the selected job;

transmitting, with the second worker, the output material via the determined delivery option to the customer specified in the customer record;

generating information on the output material;

setting the status for the selected job in the job status table to a third status;

invoking an accounting worker if the job has the third status;

processing, with the accounting worker, the generated information on the output material to determine costs of generating the output material; and

generating, with the accounting worker, an invoice including the determined costs of the output material.

39.   (Original) The article of manufacture of claim 27, wherein there are multiple workers each associated with one input status and at least one output status, wherein the status of

the job is updated to one associated output status after one worker completes processing a job, wherein the output status for one worker is the input status associated with one other worker, and wherein the definition of input and output statuses for workers defines the workflow of the job.

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